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BEFORE THE ARIZONA CORPORATION COMMISSION

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AZ CORP COMMISSION
DOCUMENT CONTROL

WILLIAM A. MUNDELL
COMMISSIONER - CHAIRMAN
JIM IRVIN
COMMISSIONER
MARC SPITZER
COMMISSIONER

IN THE MATTER OF THE GENERIC
PROCEEDING CONCERNING ELECTRIC
RESTRUCTURING ISSUES.

) DOCKET NO. E-00000A-02-0051

IN THE MATTER OF ARIZONA PUBLIC
SERVICE COMPANY'S REQUEST FOR A
VARIANCE OF CERTAIN REQUIREMENTS OF
A.A.C. R14-2-1606.

) DOCKET NO. E-01345A-01-0822

IN THE MATTER OF THE GENERIC
PROCEEDING CONCERNING THE ARIZONA
INDEPENDENT SCHEDULING
ADMINISTRATOR.

) DOCKET NO. E-00000A-01-0630

IN THE MATTER OF TUCSON ELECTRIC
POWER COMPANY'S APPLICATION FOR A
VARIANCE OF CERTAIN ELECTRIC
COMPETITION RULES COMPLIANCE DATES.

) DOCKET NO. E-01933A-02-0069

NOTICE OF FILING DIRECT TESTIMONY

Wellton-Mohawk Generating Facility ("WMGF"), by and through its attorneys,
hereby files the Direct Testimony of Robert W. Kendall of Navigant Consulting, Inc. in the

Arizona Corporation Commission

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CAR

1 Commission's Track B Proceeding.

2 Respectfully submitted this 12th day of November, 2002.

3 MARTINEZ & CURTIS, P.C.

4
5
6 By 

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11 Facility

12 **Original and Nineteen (19) copies**
13 **of the foregoing Notice of Filing of**
14 **Responsive Testimony filed this**
15 **12th day of November, 2002, with:**

16 Docket Control
17 Arizona Corporation Commission
18 1200 West Washington
19 Phoenix, Arizona 85007

20 **Copies of the foregoing hand-delivered**
21 **this 12th day of November, 2002 to:**

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7 **Copies of the foregoing mailed**
8 **this 12th day of November, 2002 to:**

9 All parties listed on Docket Nos.:

10 E-00000A-02-0051, et al.
11 (Track B Proceeding)

12 By: 

13 1752/pleadings/notice of filing testimony
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BEFORE THE ARIZONA CORPORATION COMMISSION

1 WILLIAM A. MUNDELL

CHAIRMAN

2 JIM IRVIN

COMMISSIONER

3 MARC SPITZER

COMMISSIONER

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5 PROCEEDING CONCERNING ELECTRIC
6 RESTRUCTURING ISSUES.

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14 POWER COMPANY'S APPLICATION FOR A
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) DOCKET NO. E-01933A-02-0069

16
17 DIRECT TESTIMONY OF

18 ROBERT W. KENDALL

19 ON BEHALF OF

20 WELLTON-MOHAWK GENERATING FACILITY

21
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23
24 NOVEMBER 12, 2002

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SCHEDULE RWK-1: ENVIRONMENTAL PORTFOLIO
STANDARDS IN STATESATTACHED

INTRODUCTION

Q. PLEASE STATE YOUR FULL NAME AND BUSINESS ADDRESS.

A. My name is Robert W. Kendall. My business address is 225 West Broadway, Suite 400, Glendale, California 91204-1331.

Q. PLEASE DESCRIBE YOUR PROFESSIONAL QUALIFICATIONS AND EXPERIENCE.

A. Appendix 1, which is attached to this Direct Testimony, describes my professional qualification and experience.

Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS PROCEEDING?

A. I am providing expert testimony on behalf of the Wellton-Mohawk Generating Facility ("WMGF").

Q. CAN YOU DESCRIBE THE WELLTON-MOHAWK GENERATING FACILITY?

A. WMGF is a generation project being developed in southwestern Arizona. WMGF will be a natural gas fired 620 MW (peak) combined cycle generating facility constructed on land to be owned by the Wellton-Mohawk Irrigation and Drainage District ("WMIDD") and leased to the project, located about 25 miles east of Yuma, Arizona and 9 miles west of Wellton, Arizona. The project will be constructed in two phases with the first phase of 310 MW (peak) projected to be

1 in commercial operation by spring 2005. The project participants in WMGF are
2 Dome Valley Energy Partners LLC ("Dome Valley"), WMIDD, and the Yuma
3 County Water Users Association ("YCWUA"). It is expected that the members of
4 Dome Valley will be Jasper Energy Development LLC ("Jasper") and Primesouth,
5 Inc., a wholly owned subsidiary of the SCANA Corporation.
6

7
8 WMGF is unique in that it intends to utilize the patented SEECOTTM Solar
9 Thermal Technology to increase efficiency by converting solar energy into
10 thermal energy for inlet air-cooling of the Combustion Turbine Generator
11 ("CTG"). This would result in an approximate 12 percent increase in CTG
12 electric output during times of peak solar radiation, as well as improved efficiency
13 and/or a lower heat rate. Using this system, WMGF will generate kilowatt-hours
14 that qualify as renewable energy credits under Arizona's Environmental Portfolio
15 Standard ("EPS") and that qualify as renewable energy purchases under similar
16 programs in both Nevada and California.
17

18
19 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

20 **A.** The purpose of my testimony is to provide recommendations for consideration by
21 the Arizona Corporations Commission ("ACC" or "Commission") on several key
22 issues relevant to the Track B Competitive Solicitation Process ("Track B" or
23 "Competitive Solicitation Process") to be conducted in March 2003, as formulated
24 by Staff in the Staff Report submitted in this proceeding. I also intend to respond
25
26

1 to testimony submitted in this proceeding by Arizona Public Service ("APS").
2 WMGF fully agrees with the goals for the solicitation articulated by the Staff—
3 that the process facilitates a manageable transition to a competitive wholesale
4 power market that provides reliable power and economic benefits to Arizona's
5 consumers over the long term and that the process is open, transparent,
6 understandable, and flexible. WMGF also believes that the process can and
7 should be designed in a manner to encourage the achievement of two additional
8 public policy goals; namely, (1) the elimination or mitigation of the reliability
9 must run ("RMR") issues in Arizona's Phoenix, Tucson, and Yuma Transmission
10 Import Constraint Areas and (2) the meeting of the utilities' obligations under
11 Arizona's Environmental Portfolio Standard ("EPS"). The recommendations
12 contained in this testimony have been developed to help achieve all of these goals
13 summarized as follows:
14
15

16
17 1. In order to result in the best prices for Arizona's electric consumers, the
18 solicitation process should be designed to allow for the Independent Power
19 Producers ("IPPs) to propose, and the utilities to choose, power contracts of
20 varying durations including long-term contracts of 15 to 20 years in length. This
21 should be done without biasing the process to favor or disfavor contracts of any
22 particular length. Such a mixture of contract terms will encourage the
23 development of a competitive market by allowing both existing and new
24 generation projects to submit proposals that will provide Arizona's electric
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26

1 consumers with a natural hedge against a wide range of future risks, and should
2 allow the utilities to obtain the most favorable prices on behalf of ratepayers.

3
4 2. RMR has been identified by the Commission as an impediment to
5 obtaining a competitive wholesale market in Arizona. In addition, there are
6 growing loads within the Commission's identified load pockets, namely the
7 Phoenix, Tucson, and Yuma Transmission Import Constraint Areas, which must
8 be served. Thus, all of the load within these load pockets, including that served
9 by the existing RMR units, should be contestable in the Track B process. This
10 will allow the utilities and the Commission to assess what competitive alternatives
11 besides new transmission might be available to mitigate or eliminate the RMR
12 problem and will provide alternatives to the existing RMR generation.
13
14

15
16 3. Track B presents a golden opportunity for the utilities to access the market
17 for competitive proposals to fill their EPS obligations and, if properly structured,
18 can encourage bidders to propose innovative technologies to provide cost-
19 effective renewable resources. The bid evaluation process should provide
20 appropriate recognition for the additional value provided by renewable resources.
21 The Commission has recognized that renewable resources are currently more
22 costly than other resources, yet has decided to mandate the EPS mandate due to
23 the many other public benefits provided by such resources. Thus, it is only
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1 reasonable and in the best interests of the utilities' ratepayers for any competitive
2 procurement process to give appropriate credit for these other benefits.

3
4 **GOALS OF COMPETITIVE SOLICITATION PROCESS**

5 **Q. WHAT SHOULD BE THE GOALS OF TRACK B?**

6
7 **A.** Staff in its Staff Report articulates that the goal of Track B should be as follows:

8 In order to facilitate a manageable transition to a
9 competitive wholesale power market that provides
10 economic benefits to consumers in Arizona, the Staff
11 believes that a transparent process, one that is equitable
12 and auditable, needs to be established. That process
13 must be well developed, flexible, and understood by all
14 participants in the process. **Furthermore, the process
15 must result in reliable power being available over
16 the long term at prices that are reasonable.**
17 [Emphasis Added] (Staff Report, Page 1, Lines 7 – 12)

18 WMGF believes the above statement encouraging the procurement of reliable power at
19 reasonable prices over the long term is entirely consistent with Commission public policy,
20 is consistent with economic principles of competitive markets, is reasonable and prudent,
21 and is in the best interests of Arizona's ratepayers. In addition to long term reliable
22 power at reasonable prices, WMGF believes that the Competitive Solicitation Process
23 should be designed in a manner to achieve two additional public policy goals articulated
24 by Staff or the Commission in other proceedings including the Second Biennial
25 Transmission Assessment proceeding and the recent Commission promulgation of the
26 EPS Rule A.A.C. R14-2-1618. The Second Biennial Transmission Assessment
proceeding attempts to find solutions to Arizona's Phoenix, Tucson, and Yuma load

1 pocket problems and the EPS mandates all of Arizona's regulated utilities to derive a
2 portion of their total retail load from renewable energy resources as part of the utilities'
3 total generation portfolio. Unfortunately, although Staff emphasizes reliability and low
4 prices over the long term as a stated goal in the Staff Report, Staff strongly encourages
5 short-term contracts over long-term contracts by providing incentives for short-term
6 contracts while creating regulatory uncertainty for long-term contracts. (Staff Report,
7 Section E, Terms Required for Staff Recommendation, Pages 24 – 26). APS allows for
8 contracts of no longer than four years under its proposed competitive solicitation
9 proposal. (Direct Testimony, Thomas J. Carlson, Page 3, Line 10). Moreover, Staff in its
10 Staff Report apparently contradicts the EPS Rule by recommending exclusion of
11 generation sources that the utilities' must take in compliance with the Arizona's EPS
12 from the utilities' unmet needs calculation. (Staff Report, Page 35, Lines 1 through 8).
13 APS followed Staff's recommendation and excluded renewable resources as well as
14 RMR generation from APS' unmet needs calculations. (Direct Testimony, Peter M.
15 Ewen, Schedule PME-1). Accordingly, my arguments: (1) for the inclusion of long-term
16 contracts in the Competitive Solicitation Process; (2) the inclusion of renewable energy
17 generation as unmet needs in the Competitive Solicitation Process; and (3) the inclusion
18 of RMR generation as unmet needs in the Competitive Solicitation Process, are discussed
19 in my testimony below.
20
21
22

23 LONG-TERM CONTRACTS

24
25 **Q. WHAT LENGTH OF CONTRACT TERM DOES APS PROVIDE FOR IN**
26

ITS TRACK B TESTIMONY?

A. As I indicated above, APS provides for contract terms ranging from one quarter to up to four years. (Direct Testimony, Thomas J. Carlson, Page 3, Line 10).

Q. WHAT IS YOUR UNDERSTANDING OF APS' REASONS FOR LIMITING THE MAXIMUM LENGTH OF THE CONTRACT TERM TO FOUR YEARS?

A. APS witness Mr. Carlson on page 9 of his testimony gives three reasons for limiting the maximum length of the contract term to four years. First, he indicates that the future establishment of an RTO may expand the number of potential bidders in the Arizona market. Second, he believes that FERC's proposed Standard Market Design ("SMD") is a "wild card" that may affect both the price and availability of transmission for one set of potential bidders *vis a vis* others. Third, he states that counterparty credit issues make it more risky for APS to enter into long-term transactions. At the November 6, 2002 workshop, Mr. Carlson appeared to add a fourth reason for his recommendation; namely, that there is the risk APS could buy power under a long term contract only to find out later that it could have procured that same amount of power in the market at a lower price.

Q. WHAT IS YOUR UNDERSTANDING OF STAFF'S POSITION ON CONTRACT TERM LENGTH?

A. As I indicated above, Staff encourages short-term contracts only. I understand

1 that Staff anticipates that during 2003 each utility will primarily require contract
2 terms of one to three years; however, it also believes that if in the judgment of the
3 utility market conditions or economic opportunities dictate longer contract terms,
4 each utility is responsible for entering into such contracts that are reasonable
5 (Staff Report, Page 6). Staff, however, provides some level of regulatory certainty
6 for rate recovery only for short-term contracts, which creates a strong disincentive
7 for the utilities to enter into long-term contracts. (Staff Report, Pages 25 - 26)
8

9
10 **Q. DO YOU AGREE WITH EITHER STAFF'S OR APS' POSITION ON**
11 **CONTRACT TERM LENGTH?**

12 **A.** In my opinion the Commission should allow for contracts of varying terms,
13 including long-term contracts with terms of 15 to 20 years. The evaluation
14 process should also neither encourage nor discourage the utilities from selecting
15 bids of varying contract terms of 15 to 20 years, but should consider the merits of
16 the bids, including price, against reasonable forecasts of the future market. Such a
17 portfolio approach will result in the lowest generation prices for Arizona's
18 ratepayers and will provide some natural hedges against an uncertain future.
19

20
21 **Q. WHY SHOULD CONTRACT TERMS OF LONGER THAN FOUR YEARS**
22 **BE ENCOURAGED?**

23
24 **A.** The Commission's stated purpose of the Track B solicitation is "to encourage a
25 phase-in to competition, encourage the development of a robust wholesale market
26

1 for generation, and obtain some of the benefits of the new Arizona generation
2 resources, while at the same time protecting ratepayers.” (Decision No. 65154,
3 Pages 23-24) This argues for a highly inclusive process, which encourages both
4 large and small entities to bid both new and existing generation with the
5 generation offering fuel, location, equipment, and contract term diversity. In
6 addition, in order to protect ratepayers, there is a need to avoid two of the
7 problems that have plagued the California market; namely, placing too much
8 reliance on the short-term market and having too much generation being supplied
9 by too few entities.
10

11
12 The best way to achieve these purposes is to design the Track B solicitation so
13 that new generation projects have an equal opportunity to compete with existing
14 generation. For it is with new generation projects that you typically bring new
15 developers into the market. In addition, new generation adds incremental power
16 to the grid thereby increasing supply margins and improving reliability. New
17 generation facilities also are generally more efficient and more environmentally
18 friendly than existing generation due to their ability to more easily employ the
19 newest technologies. For example, the WMGF project is being designed to
20 employ the patented SEECOTTM Solar Thermal Technology to increase efficiency
21 by converting solar energy into thermal energy for inlet air-cooling of the CTG.
22 Furthermore, new generation projects can be located in areas that provide greater
23 overall system and customer benefits.
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1
2 **Q. ARE YOU SUGGESTING THAT NEW GENERATION PROJECTS CAN**
3 **ONLY COMPETE IN THE COMPETITIVE SOLICITATION PROCESS**
4 **IF THE PROCESS ALLOWS LONG-TERM CONTRACTS?**

5 **A.** Yes. Today's business environment for development and construction of new
6 power plants throughout the United States has changed dramatically from the
7 business environment prior to mid-2001, making it highly unlikely that an IPP can
8 obtain non-recourse financing for a new power plant over roughly 50 MW in size
9 without having a significant amount of the project's output contracted to a credit
10 worthy entity. Prior to mid-2001, IPPs found it relatively easy to obtain non-
11 recourse financing for new generation projects in a market that was (1) opening up
12 to new entrants with deregulation, (2) experiencing rapidly increasing market
13 prices, and (3) experiencing shortages of generation. In this market, Enron, other
14 large generation developers, and energy traders were reporting large profits and
15 the financial community was generally very willing to finance new projects even
16 if they were purely for merchant purpose.
17
18

19
20 However, the market has now changed considerably. Today we have a financial
21 community that is hesitant to loan any funds for new generating facilities due in
22 large part to the financial meltdown of Enron, several other large generation
23 developers, and energy traders. We are also seeing throughout the West spot
24 market prices at far lower levels than before mid-2001. Thus, today new
25
26

1 generation facilities cannot generally be financed without having a significant
2 portion of their output sold through contracts such as long term power purchase
3 agreements ("PPAs") to a credit worthy entity. Since project financings are
4 generally tied to such PPAs, longer contract terms translate into lower annual debt
5 service requirements, which in turn can translate into lower offered prices. In my
6 opinion, for these reasons contract terms need to be in the 15 to 20 year range for
7 new generation projects.
8

9
10 **Q: WHAT KIND OF TERMS ARE LENDERS REQUIRING IN PPAs**
11 **BEFORE AGREEING TO FINANCE A NEW GENERATING FACILITY**
12 **ON A NON-RECOURSE BASIS?**

13 **A:** The answer to this question depends on the financial strength of the entity seeking
14 the non-recourse financing; however, as a general proposition lenders are willing
15 to lend to creditable IPPs 60% to 75% of the total capital cost of the project for a
16 term of 10 to 20 years so long as a PPA with a credit worthy counterparty
17 provides 80% to 100% of the debt service. The key here is that the minimum
18 needed PPA contract term must tie to the length of the financing. Today, in
19 Arizona a minimum 15-year contract term and preferably a 20-year term is
20 probably needed in order for a developer to offer what would be viewed as a
21 competitive price.
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1 **Q. DO YOU BELIEVE IT IS IN THE BEST INTERSTS OF ARIZONA'S**
2 **RATEPAYERS TO LIMIT CONTRACT TERMS TO A MAXIMUM OF**
3 **FOUR YEARS?**

4 A. No. Neither the possible establishment of an RTO in Arizona nor the
5 implementation of FERC's SMD, which may not even be adopted due to
6 opposition in many states throughout the United States, are likely to dramatically
7 change the competitive market in Arizona for several years. Also, if this were a
8 serious concern to Arizona, contract terms should probably be no longer than one
9 year. Second, just because some counterparties may not be able to meet a utility's
10 credit criteria for a long-term contract should not be cause to eliminate long-term
11 contracts all together. This would be a classic case of throwing the baby out with
12 the bath water. The obvious way to address this issue is to establish appropriate
13 and reasonable credit criteria to protect both parties to the contract, which WMGF
14 supports and is being done in the Track B process.

15
16
17
18 Third, the argument that a long-term contract could increase the utility's costs by
19 locking in prices that later prove to be higher than market prices ignores two key
20 items. First, this is not an "all or nothing" proposition. In other words, I agree
21 that a utility should not lock in all of its needs with long-term contracts. Instead,
22 it should strive to have a well-balanced portfolio of contract purchases consisting
23 of contracts with varying terms, expiring in varying years, and with varying
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1 physical attributes of size, fuel type, location, and so forth. In this way, the utility
2 would have natural hedges to protect its customers in an uncertain world

3
4 The second key item that is important to keep in mind is the fact that this is a very
5 good time to go to the market seeking long-term contracts. It is axiomatic that
6 today's market prices are at very low levels compared to prices in recent years.
7 While no one knows for certain what future prices will be, recent forecasts clearly
8 predict rising electricity prices with an improving economy and the reduction of
9 the temporary power surpluses in the West resulting from the recent completion of
10 a number of new, large generating facilities. Perhaps even more importantly, the
11 Arizona load serving utilities are in the enviable position of being two of only a
12 handful of credit worthy entities in the region who are planning to enter into
13 power purchase contracts in the near future. In short, this is a classic "buyers
14 market" that experience teaches us will not last forever. What better time can
15 there be for the Arizona load serving entities to enter into a long-term contract?
16
17

18
19 **Q. AS A RESULT OF WORKSHOP DISCUSSIONS, HAS APS CHANGED**
20 **ITS POSITION ON LONG-TERM CONTRACTS IN ANY WAY?**

21 **A.** APS may have softened its position on this issue. During the workshop held on
22 November 6, 2002, Mr. Carlson, as head of energy trading for APS and after
23 indicating he would be APS' lead person overseeing the Track B solicitation
24 process, stated that APS will entertain bids for terms longer than four years as
25
26

1 long as these bids meet APS' credit requirements and offer attractive prices. Mr.
2 Steven Wheeler, a Vice President for APS, also stated at this same workshop that
3 APS would consider comments and concerns expressed during the workshop and
4 would determine whether it would revise its testimony in any way. Accordingly,
5 it is hoped that APS will restate its position on the record in its responsive
6 testimony due on November 18, 2002 to reflect its new desire to entertain long-
7 term contracts in its competitive solicitation request for proposals.
8

9
10 **Q. DOES THIS STATED POSITION SATISFY YOU THAT THIS ISSUE HAS**
11 **BEEN PROPERLY ADDRESSED?**

12 A. No. For all of the reasons stated in my testimony and so that potential bidders
13 have some certainty, I recommend the Commission in its Track B order
14 specifically allow bids of varying contract terms of 15 to 20 years, that APS be
15 required to evaluate all bids on an equal basis, and that APS be assured of full rate
16 recovery for its prudent decisions.
17

18
19 **RENEWABLE ENERGY**

20 **Q. YOU MENTION EARLIER IN YOUR TESTIMONY THAT YOU**
21 **BELIEVE TRACK B SHOULD BE USED AS A MECHANISM FOR THE**
22 **UTILITIES TO PROCURE A PORTION OF THEIR RENEWABLE**
23 **RESOURCE PURCHASE OBLIGATIONS UNDER ARIZONA'S EPS.**
24 **DOES APS HOLD THIS SAME VIEW?**
25
26

1 A. APS, through its witness Mr. Ewen, has excluded any planned "grid connected"
2 EPS requirement from the utility's Schedule PME-1, which summarizes APS'
3 unmet capacity and energy reliability needs. Thus, it is our reading of APS'
4 testimony that procuring renewable resources is not an APS objective under Track
5 B. It is worth noting, however, that during the November 6 workshop, APS stated
6 it would consider bids or proposals from IPPs containing renewable resources in
7 the Competitive Solicitation Process, but without providing specifics on how and
8 in what manner APS would consider these proposals. In my opinion, APS
9 seemed to imply it would evaluate such bids or proposals on the same basis as all
10 other bids, thus giving no recognition to the fact that the bid contained renewable
11 energy in furtherance of the Commission's EPS public policy goal.
12

13
14
15 **Q. WHAT REASONS HAS APS GIVEN FOR NOT MAKING SUCH**
16 **PROCUREMENT AN OBJECTIVE IN THE COMPETITIVE**
17 **SOLICITATION PROCESS?**

18 A. To my knowledge, APS has not clearly articulated its reasons for its position;
19 however, based on comments made during the November 6, 2002 workshop, APS
20 seems to have two reasons. First, APS has emphasized that its decision to exclude
21 renewable energy from the Track B solicitation process is consistent with Staff,
22 which also has excluded APS' EPS requirements from the calculation of unmet
23 capacity and energy reliability needs. Second, APS says that it has initiated a
24 separate "renewables only" solicitation.
25
26

1
2 **Q. ARE YOU SATISFIED WITH THIS POSITION?**

3 A. No. I believe the Commission in its Track B order should specifically set the
4 procurement of a portion of each utility's EPS requirement as a goal of the
5 Competitive Solicitation Process.
6

7
8 **Q. WHY DO YOU BELIEVE THAT PROCURING RENEWABLE**
9 **RESOURCES SHOULD BE AN OBJECTIVE OF THE COMPETITIVE**
10 **SOLICITATION PROCESS?**

11 A. As indicated early in my testimony, the Commission promulgated the EPS
12 mandate and codified it in A.A.C. R14-2-1618. Under Rule R14-2-1618, all
13 Arizona regulated utilities must have a certain percentage of their total energy
14 portfolios be derived from renewable energy resources. For example, in 2003 .6%
15 of APS' total energy portfolio must be derived from renewable energy resources.
16 Thus, logic has it that if the purpose of the Track B is for the utilities, such as
17 APS, to acquire their wholesale power to meet their portfolio requirements
18 through a competitive process, it only makes sense that the acquisition of the
19 renewable energy portion of their total power portfolio also be acquired through
20 the competitive solicitation process. It is worth noting that the Commission has
21 required two of Arizona's newest power plant projects (Bowie Power Station
22 Case No. 118 and La Paz Generating Facility Case No. 116) to include a
23 renewable energy generation resource as part of the project as a condition of
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1 receiving the Certificate Environmental Compatibility ("CEC"). In my opinion,
2 this demonstrates the Commission's desire that renewable energy be an important
3 component of all future energy generation portfolios held by the utilities in
4 serving Arizona's energy needs.

5
6 From a practical standpoint, without renewable resources being included in the
7 Competitive Solicitation Process, it is unclear how some innovative projects
8 combining renewable and fossil fuel technologies ("Hybrid Renewable
9 Generation"), such as WMGF and other projects would be appropriately
10 considered and evaluated. We don't believe it is the Commission's intent nor in
11 the public's interest to disadvantage Hybrid Renewables. Inclusion of renewable
12 resources in Track B is also consistent with the Commission's goal of balancing
13 competing interests of preserving the environment and maintaining or lowering
14 retail rates (Decision 62506, Pages 16-17). In other words, the utilities may very
15 well determine that the most cost effective way to achieve their EPS requirements
16 is to procure at least a portion of their renewable energy requirements through a
17 large-scale process such as Track B. For these reasons, WMGF would
18 recommend that renewable resources be specifically solicited in Track B and that
19 separate renewables only solicitations also be held as needed.
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1 **Q. WOULDN'T ADDING THE PROCUREMENT OF RENEWABLE**
2 **RESOURCES TO TRACK B UNNECESSARILY COMPLICATE THE**
3 **PROCESS?**

4 A. No, not if the process were properly structured. Each utility could simply include,
5 as one of its unmet needs, its EPS requirement for each year. Each bidder would
6 then clearly specify in its bid the amount of qualifying renewable resources, if any,
7 it was offering by year and under what price, terms and conditions. The utilities
8 would consider this information in their bid evaluations and apply an appropriate
9 credit in recognition of the additional value of renewable resources.
10

11
12 **Q. WHAT DO YOU MEAN BY APPLYING AN APPROPRIATE CREDIT**
13 **FOR THE ADDITIONAL VALUE OF RENEWABLE RESOURCES?**

14 A. The Commission has recognized that most renewable resources at present are
15 more expensive than fossil fuel resources. The Commission, however, also
16 recognizes the public benefits of clean renewable energy resources over fossil fuel
17 resources. The Commission further recognizes the need to diversify Arizona's
18 fuel resource mix so that the State does not over rely on volatile natural gas
19 supplies and prices. Accordingly, the Commission made the EPS a mandate and
20 provided a funding mechanism through a special EPS surcharge on customer bills
21 and the reallocation of all existing System Benefits Charge funding including
22 DSM Program funding to EPS uses (jointly the EPS surcharge and System
23 Benefits Charge referred to as "EPS Funds"). Although we are in the process of
24
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26

1 verifying this amount with APS, I understand that APS is currently collecting
2 about \$12 million a year from its ratepayers through the EPS Surcharge and the
3 reallocation of the Public Benefits Charge for the procurement of renewable
4 energy under the EPS. Thus, the Commission has already in effect determined
5 that the reasonable additional value of renewable energy is the amounts of funds
6 generated from these two charges. The goal then should be to procure as much
7 renewable resource energy as possible to achieve EPS at the lowest reasonable
8 prices. The maximum amount to be paid under this approach would be the market
9 price for conventional power (as determined in the Track B process) plus an
10 additional value component representing the EPS Funds. Or, in other words, the
11 additional value on a dollars per megawatt hour basis would equal the amounts
12 collected through EPS Funds divided by the total megawatt hours to be purchased
13 from renewables in the EPS.
14
15

16
17 **Q. HOW WOULD THIS BE HANDLED IN THE BID EVALUATION?**

18 A. WMGF would recommend that the Commission establish a higher benchmark
19 “price to beat” for renewables that recognizes this additional value. This
20 additional value would also be reflected in the bid scoring. Use of this approach
21 would be simple, straightforward, and provide a reasonable way to quantify the
22 value of renewables using a method already adopted by the Commission.
23
24
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26

1 **Q. WHAT ARE OTHER JURISDICTIONS DOING TO PROCURE**
2 **RENEWABLE RESOURCES?**

3 A. A total of twelve states (including Arizona) currently have an EPS or are in the
4 final process of codifying an EPS. Schedule RWK-1 attached to this testimony
5 compares some of the key attributes of these programs. These states have
6 generally recognized that renewable resources are more expensive than
7 conventional resources and have allocated additional resources for their
8 procurement. At least one state--California--has very recently implemented a
9 major procurement program for renewables.
10

11
12 California has just within the last few months adopted by state law a 20% EPS to
13 be attained by 2017. In order to implement this requirement and to obtain
14 additional resources to meet the needs of the state's three investor owned utilities
15 ("IOUs"), the California Public Utilities Commission ("CPUC") has recently
16 issued a decision (Decision 02-08-071, August 22, 2002) requiring the IOUs to
17 each implement a competitive procurement process similar to Track B. In its
18 decision, the CPUC struggled with this issue of ascribing an appropriate value to
19 renewable energy and decided to adopt \$53.70/MWH for the first 5 years of the
20 contract as an interim benchmark for renewable resources. The decision provides
21 that any proposal at this price or lower is *per se* reasonable. The IOUs are also
22 required to fairly consider proposals from renewable resources offering prices
23 higher than the benchmark as well as longer contract terms and to justify why
24
25
26

1 each such proposal is or is not acceptable. The \$53.70 value was derived from a
2 forecast of expected market prices in the state and prices in contracts recently
3 entered into by entities within the state. The CPUC plans to more fully address
4 this benchmark issue, including the setting of benchmarks beyond five years,
5 during proceedings to be held in 2003.
6

7
8 **Q. ARE YOU SUGGESTING THAT THE COMMISSION SHOULD ADOPT**
9 **THE CALIFORNIA MODEL?**

10 A. No. I provide the summary of the California experience simply for the
11 Commission's information. I recommend that the Commission adopt the model
12 that I stated earlier in my testimony. However, if the Commission decides for any
13 reason not to include the procurement of renewable resources as an objective of
14 the Track B proceedings, the California model could serve as an example of an
15 alternative way to procure EPS required renewable resources. In other words,
16 Arizona could initiate a separate renewable resource solicitation process that
17 specifically provides appropriate means for considering Hybrid Renewables as
18 well as pure renewable resources.
19

20
21 **RELIABILITY MUST RUN AND TRANSMISSION IMPORT CONSTRAINTS**

22
23 **Q. YOU INDICATED ABOVE THAT ONE OF THE OBJECTIVES OF**
24 **TRACK B SHOULD BE TO ACQUIRE RESOURCES THAT WOULD**
25 **MITIGATE OR ELIMINATE THE RMR ISSUE. DOES APS HOLD THIS**
26

1 **SAME VIEW?**

2 A. APS witness Mr. Ewen does not include in his calculation of unmet capacity and
3 energy reliability needs in Schedule PME-1 any component for either APS owned
4 or non-APS owned RMR generation. Thus, APS provides no specific provision
5 for acquisition of resources to mitigate or eliminate the RMR issue. However,
6 during the November 6 workshop, APS stated it would consider such bids in a
7 Competitive Solicitation Process without specifying how and in what manner they
8 would be considered. In my opinion, APS seemed to imply it would evaluate
9 such bids on the same basis as all other bids giving no recognition to the fact that
10 the bid mitigated or eliminated RMR.
11

12
13 **Q. DOES APS STATE ANY REASONS FOR ITS POSITION?**

14 A. I am not aware of APS stating any reasons for its position.
15
16

17 **Q. ARE YOU SATISFIED WITH THIS POSITION?**

18 A. No. I believe the Commission in its Track B order should specifically set the
19 elimination or mitigation of the RMR issue as an objective of the Competitive
20 Solicitation Process.
21

22 **Q. WHY DO YOU BELIEVE THIS SHOULD BE AN OBJECTIVE OF THE**
23 **TRACK B SOLICITATION?**

24 A. In my opinion, all loads in RMR areas should be contestable in the Track B
25
26

1 process. In the generic proceeding concerning electric restructuring issues, the
2 ACC Staff recommended that the Commission should order jurisdictional utilities
3 to resolve RMR generation concerns (Decision 65154, Page 18). Specifically,
4 Staff argued the utilities should:

- 5 1. Perform a study to analyze the merits of existing dependence on RMR
6 instead of building new transmission;
7
- 8 2. Perform a study analyzing merits of any future contemplated utilization of
9 RMR to defer transmission projects; and
- 10 3. File such study reports prior to implementing any new RMR generation
11 strategies.

12
13 The Commissioners largely agreed with Staff and ordered the utilities to work
14 with Staff to develop a plan to resolve RMR generation concerns and include
15 results in the 2004 Biennial Transmission Assessment (Decision No. 65154, Page
16 33). The Commission further ordered the utilities to file annual RMR generation
17 study reports with the Commission in concert with their January 31 ten-year plans
18 for review prior to implanting any new RMR generation strategies until the 2004
19 Biennial Transmission Assessment is issued.
20

21
22 Since RMR generation concerns can be resolved by either new transmission
23 and/or new generation and further since new generation options can come from
24 either the utilities themselves or from IPPs, it is important for any IPP generation
25
26

1 options to be identified as part of the issue resolution process. The Competitive
2 Solicitation Process is an ideal mechanism to use to identify any such generation
3 option.

4
5 Additionally, as a matter of public policy older, less efficient, less
6 environmentally friendly power plants should be considered for replacement by
7 newer, more efficient, more environmentally friendly power plants. This is
8 especially true when there are other public policy reasons (i.e., RMR) for
9 replacing the plants.
10

11
12 **Q. DOES THIS SITUATION APPLY IN THE YUMA AREA?**

13 **A.** Yes. The situation in the Yuma area is as follows:

- 14
- 15 1. There are four early 1970's vintage RMR plants totaling 139 MW owned by
16 APS (Yucca GT 1-4) serving the area.
 - 17 2. The efficiency of these plants is around 13,000-14,000 BTU/kWh heat rate
18 versus 6000-7000 BTU/kwh heat rate for new combined cycle plants.
 - 19 3. New plants would use state-of-the-art pollution control technologies to meet
20 or exceed all state and federal standards compared to the existing plants which
21 have no pollution control equipment installed.
 - 22 4. New plants, such as WMGF, could add solar features, which provides for the
23 production of renewable energy.
24
25
26

1 **Q. DOES THE RECOMMENDED APS COMPETITIVE SOLICITATION**
2 **PROCESS ADDRESS PROCURING NEW RESOURCES TO SERVE**
3 **LOAD GROWTH IN ITS TWO LOAD POCKETS?**

4 A. APS has provided some discussion about serving loads in the Phoenix load
5 pocket, but has provided no discussion on serving loads in the Yuma load pocket.
6 Obtaining resources to serve load growth needs in both the Phoenix and Yuma
7 load pockets should in my opinion be an objective of the Track B process. I will
8 limit my discussion herein to a discussion of the Yuma load pocket.
9

10
11 By 2005 with projected load growth and existing generation and transmission into
12 the Yuma area, installed reserve margins are projected to be only 9%. Low
13 reserves necessitate that some action be taken to increase the reserve margin by
14 2005. Temporary "fixes" could be employed to forestall a permanent solution for
15 a short period of time; however, a more permanent solution is needed. Permanent
16 options are:
17

- 18 1. Construct new transmission line into area,
19 2. Increase capacity of existing lines into area, and/or
20 3. Procure/install new generation in the area.
21

22 Since the implementation of either of these two options will take several years,
23 decision makers should obtain the information now on the options so that a timely
24 decision can be made. In my opinion the Competitive Solicitation Process is the
25
26

1 ideal place to obtain the relevant information on possible generation alternatives
2 to meet this need. Relevant information on transmission options to meet this need
3 could also be studied as part of the Competitive Solicitation Process evaluation so
4 that a decision on the relative benefits of the two options could be analyzed.
5

6
7 **Q. WHAT THEN IS YOUR SPECIFIC RECOMMENDATION TO THE**
8 **COMMISSION ON RMR?**

9 A. I recommend that the Commission include the following in its order on the Track
10 B process:

- 11 1. State specifically that one of the public policy objectives of the Competitive
12 Solicitation Process is to solicit bids and proposals from generation resources
13 that will help mitigate or eliminate Arizona's RMR issue in the Phoenix,
14 Tucson, and Yuma Transmission Import Constraint Areas.
15
- 16 2. Provide that, as a matter of public policy all load in RMR areas is contestable
17 and order APS to amend its Schedule PME-1 accordingly.
- 18 3. Order each utility to include in its report to the Commission on the results of
19 the Competitive Solicitation Process progress it has made to mitigate or
20 eliminate the RMR issue.
21

22
23 **Q. DOES THIS CONCLUDE YOUR DIRECT PREFILED TESTIMONY?**

24 A. Yes
25
26

APPENDIX 1

RESUME OF ROBERT W. KENDALL

**Managing Director
Navigant Consulting, Inc.
225 W. Broadway, Suite 400
Glendale, California 91204
818-244-0117**

Robert W. Kendall, Managing Director in Navigant Consulting, Inc.'s Energy & Water Practice, has over 34 years experience in the electric power industry. Representing investor-owned utilities, municipal entities, and independent developers, he has played key roles in the development (including financing) of new electric generation and transmission projects; served as an expert or policy witness in regulatory and court proceeding; negotiated new contracts for the purchase and sale of electric power and transmission services; managed the operations of electric generation facilities; and managed the administration of contracts having payments of over \$3 billion per year. Included in the contracts Mr. Kendall has negotiated are a settlement of litigation having a financial exposure of over \$4 billion, a long-term power purchase agreement having life-time payments exceeding \$1 billion, and a long-term power purchase agreement with the developer of the nation's first merchant transmission line. He has also managed and implemented complex asset development strategies and has led statewide teams to develop new institutions to implement electric deregulation. Mr. Kendall is a qualified and recognized expert on electric system planning, project management, utility and independent power plant development and operations, power marketing, utility regulation, complex contract negotiations, electric deregulation, transmission policy, and power contract economics and accounting.

PROFESSIONAL HISTORY

Navigant Consulting, Inc. (NCI) (7/2002 – Present)
Managing Director

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Sunlaw Energy Corporation (Sunlaw) (2001- 4/2002)
President

NCI (1998-2001)
Director

Southern California Edison (SCE) (1968-1998)
Director, Municipal Business Alliances
Manager of Planning
Manager of Industry Policy Coordination
Manager of Power Contracts
Manager of Regulatory Coordination
Assistant Counsel
Various Supervisor/Engineer positions

RELEVANT PROJECT EXPERIENCE

Generation Development/Project Management

While serving as president of Sunlaw, a small independent power producer achieved record sales and earnings while simultaneously leading the development and financing of new generation projects.

While serving at NCI, managed contract teams with responsibility for negotiating power sales and other agreements with 3rd parties. Participated in the financing of several projects.

While at SCE, managed an organization of over 100 people with responsibility for negotiating and administering over 1000 contracts with over 500 entities involving expenditures of over \$3 billion per year.

Also while at SCE, led statewide teams comprised of electric utility lawyers and engineers, environmentalists, consumer advocates, large electric consumers, and regulators to develop institutions and governing rules for electric deregulation. Developed the financing plan for the over \$300 million of costs required to implement the new system.

Transmission

While at NCI, served as principal author of a statewide report titled "1998 Transmission Reliability Report" to the California legislature. Contributions were obtained from the California ISO, California Energy Commission, California Public Utilities Commission, the Western Electricity Coordinating Council, and others.

While at SCE and functioning as head of SCE's Power Contracts organization:

- Managed negotiations and administration of SCE's transmission service agreements.
- Served as a policy witness on SCE's transmission policies before FERC and the CPUC in merger and other proceedings.
- Developed contracts for and testified in certification proceedings in support of several new high voltage transmission lines, including the California-Oregon Transmission project and HVDC Expansion projects.
- Managed SCE's activities associated with the development of the Western Transmission Association (WRTA).

While at SCE and functioning on its electricity deregulation team:

- Led negotiations for the investor owned utilities with the California ISO to create the contract for turning over control of much of California's transmission resources to the ISO.
- Managed SCE's participation in the development of the California ISO's transmission tariff filing to FERC.

Contracts

For two and a half years, with NCI negotiated contracts for the purchase and sale of power, transmission services, generation land leases, transmission/distribution operations and maintenance services, and back office services.

For ten years, functioned as head of SCE's Power Contracts organization having responsibility for:

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- Negotiating new contracts that add value to SCE.
- Managing the development and administration of all of SCE's 1000 utility power purchase, transmission, joint participation and independent power purchase contracts (jointly referred to as "Power Contracts").
- Managed negotiation of two sale/leaseback arrangements—one involving SCE's share of the Palo Verde Nuclear Generating Facility and one involving a wind project developed by SeaWest
- Maximizing the value of Power Contracts to SCE's shareholders and ratepayers.
- Negotiating amendments to and protecting SCE's rights under the Power Contracts.
- Defending reasonableness of contracts and amendments before the CPUC.
- Managing SCE's relationship with its QF suppliers and wholesale municipal customers.

Expert Witness

Served as an expert witness on contractual provisions in a contract between an electric utility and independent power producer in litigation before a state superior court.

Testified as an expert witness on electric utility contracting, generation project development, proper contract administrative practices, contract economics, and appropriate accounting treatment for contract benefits and obligations in state superior court in case involving a dispute having a financial exposure of over \$100 million.

Throughout SCE career had responsibility on numerous occasions for:

- Testifying as a policy witness or as an expert witness on transmission, contracts, rates and other matters before the CPUC and FERC in merger and other proceedings.
- Providing depositions in litigation filed in federal and state courts.

Regulatory Interface

For three years, managed SCE's regulatory proceedings before the CPUC and FERC and served as SCE's principal lobbyist with these regulatory bodies.

Electric Restructuring

For three years, functioned on SCE's electric restructuring team with responsibility for:

- Designing governance structure of California's Independent System Operator (ISO) and Power Exchange
- Developing transmission access charge pricing methodology and the terms and conditions for turning transmission control over to the ISO
- Serving as SCE's project manager for obtaining FERC approval of the ISO
- Serving as SCE's principal spokesperson on restructuring before high-profile customer and government groups.

Marketing Sales

For eight months, acted as head of SCE's Municipal Business Alliance Organization with responsibility for:

- Marketing and selling Edison International's mass market, energy management, and utility-related services to municipal utilities and government entities across the U.S. and Canada.

International Matters

For four years, served as manager of SCE's team involved in E7, a group of the world's largest electric utilities from the G7 countries with responsibilities for:

- Developing and implementing policies and projects to improve the global environment
- Chairing group's Steering Committee responsible for helping developing countries formulate strategic plans and building environmentally responsible projects
- Working in partnership/cooperation with international utilities' senior management, national governments and entities such as the World Bank, Asian Development Bank and various UN organizations to accomplish objectives.

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EDUCATION

J.D., Corporate and Contract Law, Southwestern University
M. B. A., Financial Management, University of Southern California
B.S., Electrical Engineering, University of Illinois

PROFESSIONAL ASSOCIATIONS

Member, Los Angeles County and California Bar Associations

HONORS AND FELLOWSHIPS

Eta Kappa Nu & Sigma Tau Engineering Honor Societies

Selected by the Board of Governors of the California Bar Association to serve as a consultant on the state's bar examination.

PUBLICATIONS/PRESENTATIONS

Have given numerous presentations before electric industry and other groups on topics such as:

- Electric deregulation
- Transmission policy
- Generation project development
- Power marketing & contracting

Table RWK-1 (page 1)
Environmental Portfolio Standards in States
As of November 2002

<u>State</u>	<u>Effective Date</u>	<u>Applicable Time Period</u>	<u>Standard on Capacity or Energy</u>	<u>Standard by Year</u>	<u>Funding Source</u>	<u>Estimated Amounts of Funding</u>	<u>Comments</u>
Arizona	May 2001	2001-2012	Energy	2001 — .2% 2002 — .4% 2003 — .6% 2004 — .8% 2005 — 1.0% 2006 — 1.05% 2007-12 — 1.1%	Existing Systems Benefit Charge & New EPS Surcharge	\$15 million to \$20 million statewide	Solar a min 50% of EPS in 2001 & 60% 2002-2012. Trading of requirements is allowed.
California	January 2003	2003-2017	Energy	2003—1% above baseline renewable 2004-2016—1% above previous yr 2017—20%	--Up to market prices in gen retail rates --Above market prices paid directly to developer through Public Benefits Charge	Trust Fund starts at \$135million + \$1.35 billion 2002-12 with min 51.5% of these funds for above market EPS compliance.	Above market prices paid o developers must be just & reasonable
Connecticut	January 2000	2000-2009	Energy	.75% in 2000 inc to 6% by 2009 + 7% from "other renewables" (e.g., hydro)	No specific funding program	N/A	Market price renewable credit trading system in place.
Iowa	February 1997	Indefinite	Capacity	Flat 105 MW total each year	No specific funding program	N/A	Long term contracts at fair rates to stimulate renewables development
Maine	November 1999	Review every 5 yrs	Energy	30% of state's energy to be generated by renewable resources	No specified funding program	N/A	Standard is estimated to increase electricity costs by 1% to 10%
Massachusetts	April 2002	2003-2009	Energy	2003—1% 2004-09—Increase by .5%/yr >2010—Increase by 1%/yr until suspended	Suppliers purchase renewable energy certificates in open market trading	\$50/MWH payment by suppliers who do not meet standard—funds used for renewables in state	Market price renewable credit trading system in place.

Table RWK-1 (page 2)
Environmental Portfolio Standards in States
As of November 2002

<u>State</u>	<u>Effective Date</u>	<u>Applicable Time Period</u>	<u>Standard on Capacity or Energy</u>	<u>Standard by Year</u>	<u>Funding Source</u>	<u>Estimated Amounts of Funding</u>	<u>Comments</u>
Nevada	May 2002	2003-no end date specified	Energy	2003—5% 2005-13—Increase by 2% biannually to 13% >2015—15%	Rate base funding for all just & reasonable costs for compliance	None specified	≥5% renewables to be solar. Credit trading system being developed.
New Jersey	September 2001	2001-no end date specified	Energy	2001-02—3% 2003-05—3.25% 2006-12—increase by .25%/yr >2007—6.5%	Rate base funding for all reasonable & prudent costs for compliance	None specified	Credit trading system being developed.
New Mexico	Not yet effective (program proposed)	2003-no end date specified	Energy	2003—2% 2005—5% >2007—10%	Rate base funding for all reasonable costs	None specified	Utility's purchase of renewable energy approved if it does not raise total cost of energy more than .08 ¢/kwh
Pennsylvania	January 1999	Varies by each utility	N/A	Each state utility is required to promote new renewable energy using Sustainable Energy Funds	Sustainable Energy Fund (SEF) developed for each utility by settlement with State	As of Aug 2002 \$83.5 million in SEF with more \$ added annually through rates	Each utility's trust fund has a board, which oversees expenditures.
Texas	January 2002	2002-2019	Capacity	2002-03—400 MW 2004-05—850 MW 2006-07—1400 MW >2008—2000 MW <u>Capacity:</u> 2000—50 MW <u>Energy:</u> 2001—.2% 2003-09—adds .35% every 2 yrs 2011—2.2%	Rate base funding	None specified	Open market credit trading system is being used.
Wisconsin	October 1999	2002-2011	Capacity & Energy		Rate base funding for all prudently incurred costs	None specified	Credit trading system allowed and in place.